Specification Amendments:

Page 7 through 9, paragraphs [0016], [0017], and [0018]

SUMMARY OF THE INVENTION

[0016] To achieve the foregoing as well as other advantages, the present invention provides a pad ~~apparatus~~ assembled with its layers in specific positions that form an interrelated structure ~~that includes~~ including a flat, flexible wicking barrier ~~that is~~ jacketed by at least one absorbent layer covering its top side, ~~as well as~~ and at least one thermal insulative layer covering its bottom side; all of which are sewn into a seam around their edges, or otherwise attached to one another, and are as a unit encased within a fabric covering. It is not only this particular assembly that is important to note, but also that each layer functionally exploits the characteristics of its specified type of fabric. The wicking barrier is comprised of flexible, waterproof material such as vinyl or rubber coated fabric. The thermal insulative layer(s) ~~are~~ is comprised of any fabric known to have thermal qualities such as cotton batting, wool, or name brand fabrics designed for the purpose. The absorbent layer(s) is comprised of cotton batting or other similar material. When a multiserving vessel is centered upon or over the pad apparatus, the absorbent layer(s) and fabric covering are capable of capturing condensate runoff from the vessel, and they are capable of wicking away moisture from the vessel. The wicking barrier layer, which is ~~adjacent~~ positioned below the absorbent ~~feature~~ layer previously described ~~above~~, blocks absorbed water from transmitting in the thickness direction down to a surface underlying the pad. The thermal insulative layer(s) blocks radiant cooling from the vessel that would otherwise transmit to the underlying surface, thereby possibly causing secondary condensate to form beneath the pad. The overall purpose of the pad apparatus being the protection of an underlying surface and the prevention of untidy water accumulation on the same surface.

[0017] The several parts of the pad apparatus each play a role in the absorption and containment of cold-water condensate as well as eventual release of this water. For the pad apparatus to provide the necessary absorptive capacity to contain the high volume of condensate generated by multiserving vessels, moisture absorbed into the pad must somehow be extracted during its use. Not only is this necessary for containment, but moisture lingering within the pad could allow mildew to form, which would cause the pad not to be reusable. The design of the present invention capitalizes on natural principles ,of diffusion, ~~that govern~~ to direct moisture transmission through ~~fabric~~ layers of the pad to draw condensate away from a cold vessel placed upon or over the pad's ~~target area~~ center until saturation and then desorption occur. ~~A thin, relatively low-density fabric covering easily allows the condensate trickling down along all sides of a vessel to be drawn down cross plane into the denser, absorbent layer(s) beneath. The initial intake of moisture into the target area is accomplished by capillary action: the natural tendency of liquid molecules to prefer to bond with solids, rather than with other liquid molecules. Meaning in this case, that the condensate runoff will absorb into the fibers of the fabric covering instead of continuing to pool on the surface of the fibers. Once absorbed, the moisture travels through fabric by transpiring between yarns, between fibers, and through the fibers themselves.~~ Taking a closer look at the pad's functional process, condensation on the multiserving vessel moves into the pad's top fabric cover by the natural process of diffusion: the tendency of molecules to move to areas of lesser concentration. In this case, the water molecules are cold condensation formed on the outside of the multiserving vessel, and they move into the area of lesser concentration which is the dry fabric covering of the pad. It's easier to say the water is absorbed into the fabric covering. Movement into and within the fabric is accomplished by capillary action (a type of diffusion): the natural tendency of liquid molecules to prefer to bond with solids, or rather, to be attracted to them. Capillary action is a preferred term over absorption or diffusion to explain this particular part of the pad's workings because it relates fabric

density to moisture movement by describing it in terms of molecules traveling through fabric by transpiring between yarns, between fibers, and through the fibers themselves. To hammer home the point, the more fibers (density), the greater the attraction and movement of moisture. Capillary action is important here also because it makes it easier to understand why absorbed moisture does not first saturate the entire top fabric covering of the pad (in plane), but rather, the moisture begins to immediately travel in the thickness direction into the absorbent layer(s). The higher number of air pockets (low thread density) between threads comprising the fabric covering in combination with the higher density of fibers (less air pockets) in the absorbent layer(s) attracts moisture away from the fabric covering. The fabric covering is described as having low density because it has fewer fibers and more air pockets than the absorbent layer(s). The functional result of this density differential between the fabric covering and the absorbent layer(s) is that a wet target area of initial moisture intake forms in the center of the fabric covering, but the surrounding outer region of the fabric covering remains dry at this point in the process. Another way of saying this is that capillary action causes the moisture to preferentially move cross plane, straight down, instead of spreading out further in the fabric covering toward the perimeter of the pad. Below the fabric covering and the absorbent layer(s), is the wicking barrier layer, which stops water from penetrating farther down in the thickness direction. The term 'wicking barrier' is fabric industry parlance meaning waterproof. ~~So, as the moisture increases in concentration within the absorbent layer(s), it spreads out radially away from the vessel throughout the absorbent layer(s) until they are saturated to the perimeter of the pad.~~ Continuing to describe the pad's function in terms of diffusion, as moisture concentration within the absorbent layer(s) increases, it has nowhere else to go but to spread out radially away from the vessel throughout the absorbent layer(s), by capillary action, until saturation occurs.

[0018] After initial moisture intake through the target area (i.e. the center of the top fabric covering) and saturation ~~have~~ of the absorbent layer(s) has occurred, the pad begins to dry , or desorb. Drying is aided by the fact that [[a]] another moisture differential exists between a dry region of the fabric covering that surrounds the target area, and the underlying saturated layer(s). This functional combination of the saturated state of the absorbent layer(s) and the remaining dry area of the fabric covering also is a desorption field because it is an area – more a *condition* in two layers — that begins the release of moisture from the pad. It is this cooperation between layers that is really responsible for the pad's ability to dry rapidly. Next, water molecules are attracted toward the last available dry fibers within the pad; the moisture movement is 'upward' out of the saturated absorbent layer(s) because, according to principles of diffusion, there is nowhere else to go. As the previously dry region of the fabric covering is wetted from below, it becomes part of the desorption field because it becomes involved in releasing water molecules from the pad. As a reminder, ~~A majority~~ much of the fabric covering remains dry during the initial intake of moisture because condensate does not rain down from the vessel onto the entire surface area of the fabric covering, but rather, droplets hug the vessel's exterior walls as they gravitate toward the pad. These condensate droplets are absorbed into the pad immediately around the vessel's footprint on the center of the pad (target area). Molecules of the droplets are first preferentially drawn cross plane into the absorbent layer(s), instead of traveling in plane within the fabric covering, because the absorbent layer(s)[[s]] is denser (i.e., has more solid matter to attract liquid molecules and fewer air pockets) than the fabric covering. ~~Diffusion ultimately drives the absorbed moisture to wet the previously dry area of the fabric covering; the moisture is then desorbed as vapor from the low-density fabric covering. Although it may seem counterintuitive, the region of the fabric covering that surrounds the target area is indeed wetted from beneath by the moisture saturated in the absorbent layer(s). This region of the fabric covering, which initially remains dry because it is not involved in the intake of condensate~~

~~runoff, is referred to as the desorption field to distinguish its function from that of the target area.~~ The top fabric covering is the only layer that serves two separate functions, depending on the concentration of water within the pad at any given time. The separate functions are those of initial absorption to capture water from a multiserving vessel, and of desorption to dry the pad. The top fabric covering allows moisture through to the absorbent layer(s) below, but in its role as part of the desorption field (after the absorbent layer(s) has become saturated), freely releases moisture as vapor into ambient air. In his discussion of fabric drying rates, Adanur writes: "The drying mechanism [of fabrics] consists of the water on the surface of the fibers evaporating into the surrounding air. Diffusion then causes water held within the fabric to come to the surface where it too can evaporate "(p. 634). Summarizing thus far, three elements cause an interaction between layers that represent the functioning 'parts' of the present invention: diffusion and capillary action; special fabric characteristics such as density and impermeability; and the structural position of each layer within the pad.

Specification Amendments:
Page 11, [0029] only, BRIEF DESCRIPTION OF THE DRAWINGS

[0029] Identical hatching indicates that layers 1 and 7 (fabric coverings) have the same composition, cotton or other fabric with similar characteristics. Layers ~~2, 3, 5 and 6~~ 2 and 3 (associated with moisture transmission) as well as layers 5 and 6 (associated with thermal blocking) are identified with matched hatching to show ~~that~~ they are each comprised of ~~the same material~~ cotton batting or fabric with similar characteristics. Layer 4 has unique hatching because it is the only layer comprised of wicking barrier material, such as coated fabric.